

CLAIMS:

1. A secret file access authorization system with fingerprint limitation comprising the components as follows:

5 An authorization server provided with an authorization module, which provides a fingerprint template and an authorization secret key.

An encryption server provided with an encryption module, which generates a decryption secret key by accepting the authorization secret key provided by the authorization module, and produces the encrypted secret files by encrypting the secret 10 files to be encrypted.

A certification server provided with an authorization module, which accepts the fingerprint template provided by the authorization module, accepts the decryption secret key provided by the encryption module and the authorization secret key claiming certification that is sent by the client, and judges and confirms providing the certified 15 decryption secret key.

At least one client machine, each is provided with a user module, which embeds the kernel encryption/decryption unit into the corresponding operation system kernel of the client, accepts the authorization secret key provided by the authorization module and the decryption secret key provided by the encryption module, sends the claiming 20 certification respectively to certification module, opens the encryption/decryption unit with the certified authorization secret key and the certified decryption secret key which is returned after the certification module makes the certification,, and reads/writes the encrypted secret files.

2. A secret file access authorization system with fingerprint limitation according to 25 claim 1, the encryption server and the certification server are merged to constitute a system server, which is provided with the authorization module, the encryption module and the certification module.

3. A secret file access authorization system with fingerprint limitation according to 30 claim 1, the authorization server and the encryption server are merged to constitute an authorization-and-encryption server, which is provided with the authorization module and the encryption module.

4. A secret file access authorization system with fingerprint limitation according to

claim 1, the authorization server and the certification server are merged to constitute an authorization-and-certification server, which is provided with the authorization module and the certification module.

5. A secret file access authorization system with fingerprint limitation according to
claim 1, the encryption server and the certification server are merged to constitute an
encryption-and-certification server, which is provided with the encryption module and
the certification module.

6. A secret file access authorization system with fingerprint limitation according to
claim 1-5, the authorization module includes a password fingerprint unit, an
environment fingerprint sampling unit and a time fingerprint sampling unit, which are
set in parallel, as well as the authorization unit that is linked with the said three units
which are set in parallel respectively by the bidirectional programs; the authorization
unit provides the authorization secret key; while the password fingerprint unit, the
environment fingerprint sampling unit and the time fingerprint sampling unit that are
set in parallel provide the fingerprint template altogether.

15 7. A secret file access authorization system with fingerprint limitation according to
claim 6, the authorization secret key is a binary string of a certain length.

8. A secret file access authorization system with fingerprint limitation according to
claim 7, the authorization secret key can be put into the authorized entity.

20 9. A secret file access authorization system with fingerprint limitation according to
claim 6, the fingerprint template is a binary string of a certain length.

10. A secret file access authorization system with fingerprint limitation according
to claim 1-5, the encryption module includes the secret key generation unit and the
encryption unit, which are linked in sequence by the programs; the secret key
25 generation unit provides the decryption secret key after accepting the authorization
secret key provided by the authorization module; the encryption unit accepts the input
of secret files to be encrypted, and produces the encrypted secret files by using the
decryption secret key provided by the secret key generation unit.

30 11. A secret file access authorization system with fingerprint limitation according
to claim 10, the encryption unit accepts the input of the secret files to be encrypted, and
produces the encrypted secret files by using the authorization secret key.

12. A secret file access authorization system with fingerprint limitation according

to claim10, the encryption unit accepts the input of the secret files to be encrypted, and produces the encrypted secret files by using the decryption secret key and the authorization secret key at the same time.

13. A secret file access authorization system with fingerprint limitation according
5 to claim 1-5, the certification module includes an environment fingerprint certification
unit, a password fingerprint certification unit, and a time fingerprint certification unit
set in parallel by accepting the fingerprint template provided by the authorization
module; the certification interface unit linked with them by the bidirectional programs,
which also accepts the decryption secret key provided by the encryption module and the
10 certification secret key from the user module claiming certification respectively, and
provides the certified decryption secret key for the user module.

14. A secret file access authorization system with fingerprint limitation according
to claim 1-5, the user module includes the application unit, the kernel
encryption/decryption unit and the input/output unit, which are linked in sequence by
15 the bidirectional programs; as well as the authorization input unit, which accepts the
authorization secret key and sends it into the kernel encryption/decryption unit; the
kernel encryption/decryption unit provides the authorization secret key claiming
certification for the certification module, and accepts the certified decryption secret key
sent by the certification module; and the input/output unit is coupled with the encrypted
20 secret files bidirectionally; the kernel encryption/decryption unit is embedded in the
client operation system kernel.

15. A secret file access authorization system with fingerprint limitation according
to claim 14, the client operation system can be Microsoft Windows
95/98/ME/NT/2000/XP/2003 Server or Linux/Unix or Pocket, Symbian OS, Windows
25 CE embedded operation system or Mac OS or Sun OS, Novell netware and other server
or network operation systems.

16. A secret file access authorization system with fingerprint limitation according
to claim 14, the program used by the application unit can be Microsoft Office and its
components or other desktop applications or embedded applications.